

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY  
(SUPPLEMENTARY SHEET)

International file number PCT/EP2005/050560

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Re Point V.

1. Reference is made to the following documents:

D1: WO 01/16588 A  
D2: US 2003/029225 A1  
D3: EP-A-1 052 503  
D4: US 6645361

2. **Claims 25 through 27**

- 2.1 The present Application does not meet the requirements of Article 33(1) PCT, because the subject matter of Claim 25 is not novel as defined by Article 33(2) PCT.
- 2.2 Document D1 discloses (the references in parentheses refer to this document):

A sensor element (10) having a track conductor (22) applied to a solid electrolyte, which includes an electrode provided in a measuring area of the sensor element, and an electrode lead (Figure 3 or 4) connected to the electrode and situated in a lead area of the sensor element, a heating element (40) being provided for heating the measuring area of the sensor element, the electrode having a first electrode section and a second electrode section, the first electrode section being connected to the electrode lead in a transition area between the measuring area and the lead area, the first and the second electrode section being electrically connected to one another only on their sides facing away from the lead area (Figure 3 or 4).

- 2.3 Documents D2 and D3 also anticipate the novelty of Claim 25.
- 2.4 Dependent Claims 26 and, to the extent this claim can be understood, 27, also contain no novel (A.26) or inventive (A.27) features.

### **3. Claims 1 through 24**

- 3.1 The invention as defined in Claim 1 relates to a sensor element (10) having a track conductor (22) applied to a solid electrolyte which includes an electrode provided in a measuring area of the sensor element and an electrode lead (Figure 3 or 4) connected to the electrode and situated in the lead area of the sensor element, a heating element (40) being provided for heating the measuring area of the sensor element.
- 3.2 Such a sensor element is known from D1, for example.
- 3.3 The subject matter of the present invention differs from the known sensor element in that the track conductor has a narrowing in a transition area between the measuring area and the lead area.  
The subject matter of Claim 1 is therefore novel (Article 33(2) PCT).
- 3.4 The object to be achieved thereby can be seen in the reduction of the temperature gradient in the electrode surface (see also Description, p. 2, lines 18 through 20).
- 3.5 The approach proposed in Claim 1 is not disclosed in or obvious from any of the documents known from the search report. The subject matter of Claim 1 is therefore inventive (Article 33(3) PCT).

3.6 Claims 2 through 24 are dependent on Claim 1 and therefore also meet the PCT requirements regarding novelty and inventive step.

4. The invention is commercially applicable (33(4) PCT).

**Re Point VIII.**

1. The track conductor is not clearly defined in Claim 1 (Art. 6 PCT): in particular, it is not clear what is meant by the term "electrode lead." It could mean the contacting surface. In such a case, and with reference to document D4, Figure 3, the transition area of the invention would correspond to part 41, and thus the subject matter of Claim 1 would not be novel compared to D4 (Art. 33(2) PCT). In other words, the definition of the contact surface as part of the track conductor seems to be missing in Claim 1.
2. In Claims 3 and 20, the effects to be achieved are defined. Therefore, these claims are unclear (Art. 6 PCT).
3. Claim 27 is unclear (Art. 6 PCT), since it refers to features of Claim 15, on which it does not necessarily depend.